CLAIMS

What is claimed is.

1. A process comprising:

pressing an electrical bump against a film, wherein the electrical bump is disposed on a substrate; and

forming a stress-compensation layer against the electrical bump, the substrate, and the film.

2. The process of claim 1, further including removing the film.

3. The process of claim 1, wherein removing the film at least partially exposes the electrical bump.

4. The process of claim 1, wherein pressing an electrical bump against a film includes embedding the electrical bump in the film in a range from about 5% embedded to about 95% embedded.

5. The process of claim 1, wherein forming a stress-compensation layer includes a process selected from capillary underfill, vacuum-assisted capillary underfill, positive-pressure assisted capillary underfill, and injection molding underfill.

6. The process of claim 1, wherein forming a stress-compensation layer includes a process of forming a particulate-containing stress-compensation layer.

7. The process of claim 1, further including curing the stress-compensation layer, selected from ultraviolet curing, microwave curing, thermal curing, chemical curing, timed curing, and combinations thereof.

8. The process of claim 1, further including:

curing the stress-compensation layer; and

coupling the electrical bump with an electrical contact.

9. The process of claim 1, further including:

curing the stress-compensation layer; and

coupling the electrical bump with an electrical contact, wherein curing the stress-compensation layer follows coupling the electrical bump.

10. A process comprising:

pressing an electrical bump in a ball grid array disposed on a substrate against a compressible film under conditions to at least partially embed the electrical bump into the compressible film;

forming a stress-compensation layer between the substrate and the compressible film; and

removing the compressible film.

11. The process of claim 10, further including curing the stress-compensation layer.

12. The process of claim 10, further including curing the stress-compensation layer, selected from ultraviolet curing, microwave curing, thermal curing, chemical curing, timed curing, and combinations thereof.

13. The process of claim 10, wherein pressing an electrical bump includes embedding the electrical bump in the compressible film in a range from about 10% embedded to about 90% embedded.

14. The process of claim 10, wherein forming a stress-compensation layer includes a process selected from capillary underfill, vacuum-assisted capillary

underfill, positive-pressure assisted capillary underfill, and injection molding compound underfill.

15. The process of claim 10, wherein forming a stress-compensation layer includes a process selected from capillary underfill, vacuum-assisted capillary underfill, positive-pressure assisted capillary underfill, and injection molding compound underfill, the process further including:

curing the stress-compensation layer, selected from ultraviolet curing, microwave curing, thermal curing, chemical curing, timed curing, and combinations thereof.

16. The process of claim 10, wherein forming a stress-compensation layer includes a process of forming a particulate-containing stress-compensation layer.

17. An article comprising:

a substrate including an upper surface;

an electrical bump disposed on the upper surface; and

a stress-compensation layer disposed on the upper surface, wherein the electrical bump is embedded in the stress-compensation layer, wherein the stress-compensation layer includes a surface profile characteristic of an imposed compressible film.

18. The article of claim 17, wherein the stress-compensation layer includes an underfill material selected from capillary underfill material, vacuum-assisted capillary underfill material, positive-pressure assisted capillary underfill material, and injection molding compound underfill material.

19. The article of claim 17, wherein the stress-compensation layer includes an underfill material, and wherein the underfill material includes a filler particulate.

20. The article of claim 17, wherein the substrate is selected from a semiconductive device and a mounting substrate.

21. A computing system comprising:

a substrate including an upper surface;

an electrical bump disposed on the upper surface;

a stress-compensation layer disposed on the upper surface, wherein the electrical bump is embedded in the stress-compensation layer, wherein the stress-compensation layer includes a surface profile characteristic of an imposed compressible film; and

at least one of an input device and an output device.

22. The computing system of claim 21, wherein the substrate includes a microelectronic die.

23. The computing system of claim 21, wherein the substrate includes a mounting substrate and further including a microelectronic die disposed on the mounting substrate on a die side thereof, and wherein the electrical bump is disposed opposite on a board side thereof.

24. The computing system of claim 21, wherein the computing system is disposed in one of a computer, a wireless communicator, a hand-held device, an automobile, a locomotive, an aircraft, a watercraft, and a spacecraft.

25. The computing system of claim 21, further including a microelectronic die, wherein the microelectronic die is selected from a data storage device, a digital signal processor, a micro controller, an application specific integrated circuit, and a microprocessor.

26. A computing system comprising:

a substrate including an upper surface;

an electrical bump disposed on the upper surface;

a stress-compensation layer disposed on the upper surface, wherein the electrical bump is embedded in the stress-compensation layer, wherein the stress-compensation layer includes a surface profile characteristic of an imposed compressible film;

at least one of an input device and an output device; and

a housing, wherein the housing encloses the stress-compensation layer.

27. The computing system of claim 26, wherein the substrate includes a microelectronic die.

28. The computing system of claim 26, wherein the substrate includes a mounting substrate and further including a microelectronic die disposed on the mounting substrate on a die side thereof, and wherein the electrical bump is disposed opposite on a board side thereof.

29. The computing system of claim 26, wherein the computing system is disposed in one of a computer, a wireless communicator, a hand-held device, an automobile, a locomotive, an aircraft, a watercraft, and a spacecraft.

30. The computing system of claim 26, further including a microelectronic die, wherein the microelectronic die is selected from a data storage device, a digital signal processor, a micro controller, an application specific integrated circuit, and a microprocessor.